The NH Climate Action Plan
The Transportation and Land Use Connection

NH Office of Energy and Planning
Spring Conference
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NEW HAMPSHIRE DEPARTMENT OF Environmental Services

Overview

- Climate Change Policy Task Force
- Climate Change in the Northeast
- New Hampshire Greenhouse Gas Emissions
- Action Plan Recommendations
- Implementation

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Climate Change Policy Task Force

- Established through Executive Order 2007-3 December 6, 2007
  - Establish quantified greenhouse reduction goals
  - Recommend specific actions to achieve its greenhouse gas reduction goals

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Action Plan Development Process

- Climate Change Policy Task Force
  - Twenty-nine (29) members
- Working Groups (6)
  - 125+ Participants
- Six (6) Official Public Listening Sessions
  - 15 Locations
  - 275 Participants
  - 100 Commenters

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Indicators of Climate Change in the Northeast

- Winter warming
- Decreased snowfall
- Fewer days with snow on ground
- Lake ice out dates earlier
- Earlier spring runoff
- More frequent extreme precipitation
- Extended growing season
- Sea-level rise

Hodgkins et al., 2002; 2003; Wolfe et al., 2005; Wake and Markham, 2005; Wake et al., 2006

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Flooding in NH

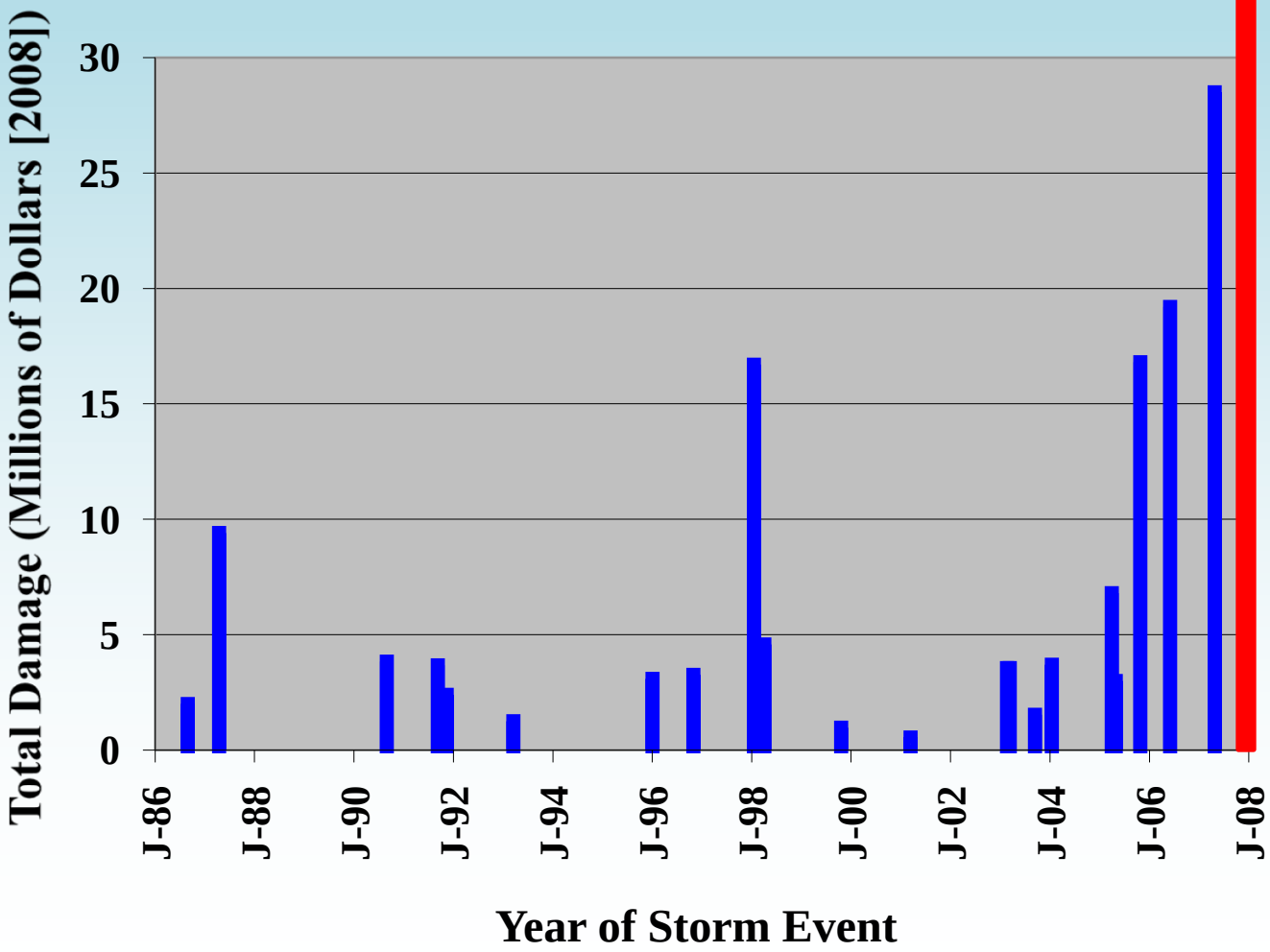
October 2005

May 2006

April 2007

September 2008

Presidentially Declared Storm-Related Disasters



Future Climate Impacts in New Hampshire

By late in the century:

- Winter snow season cut in half
- Sea-level rise up to nearly three feet
- More than 60 days with temperatures over 90°F in most cities
- Six to 24 days with temperatures over 100°F (compared with one or two days per year historically).

Northeast Climate Impacts Assessment (2007)

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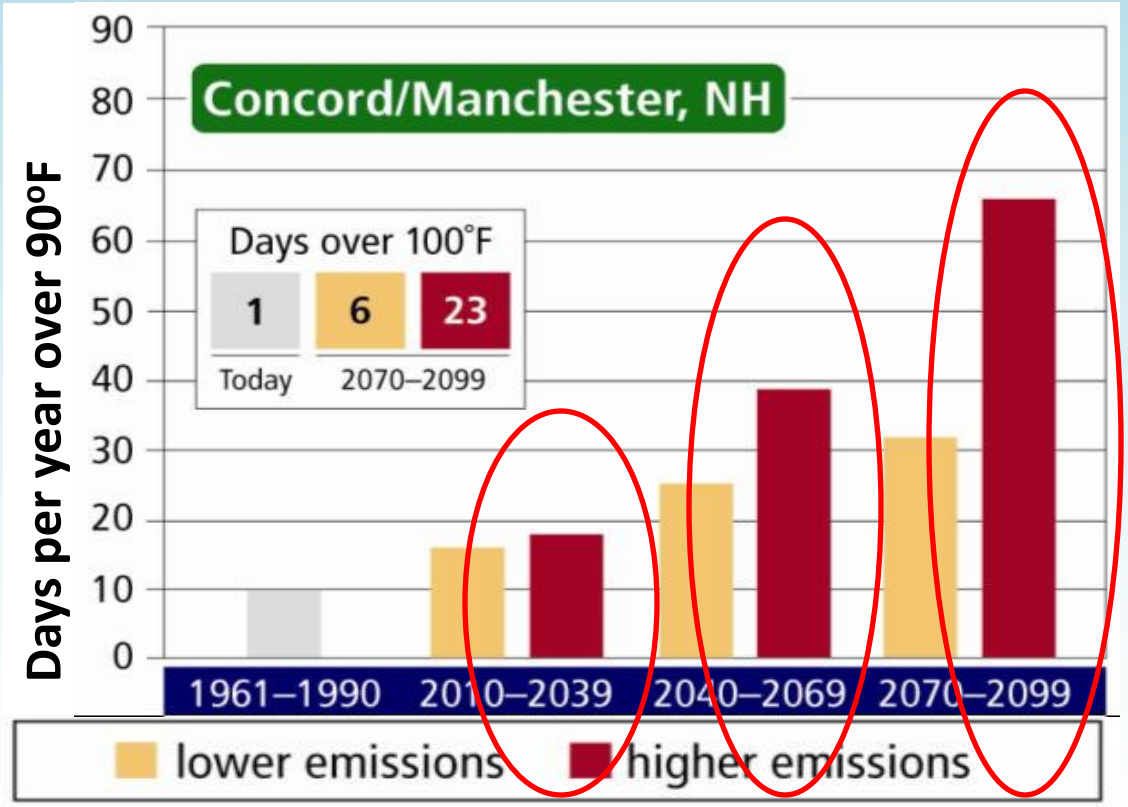
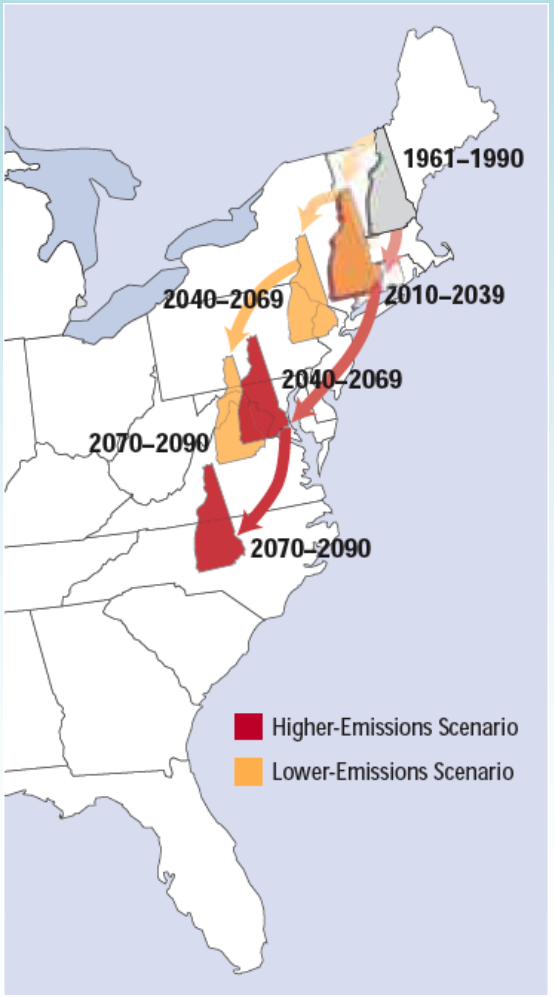
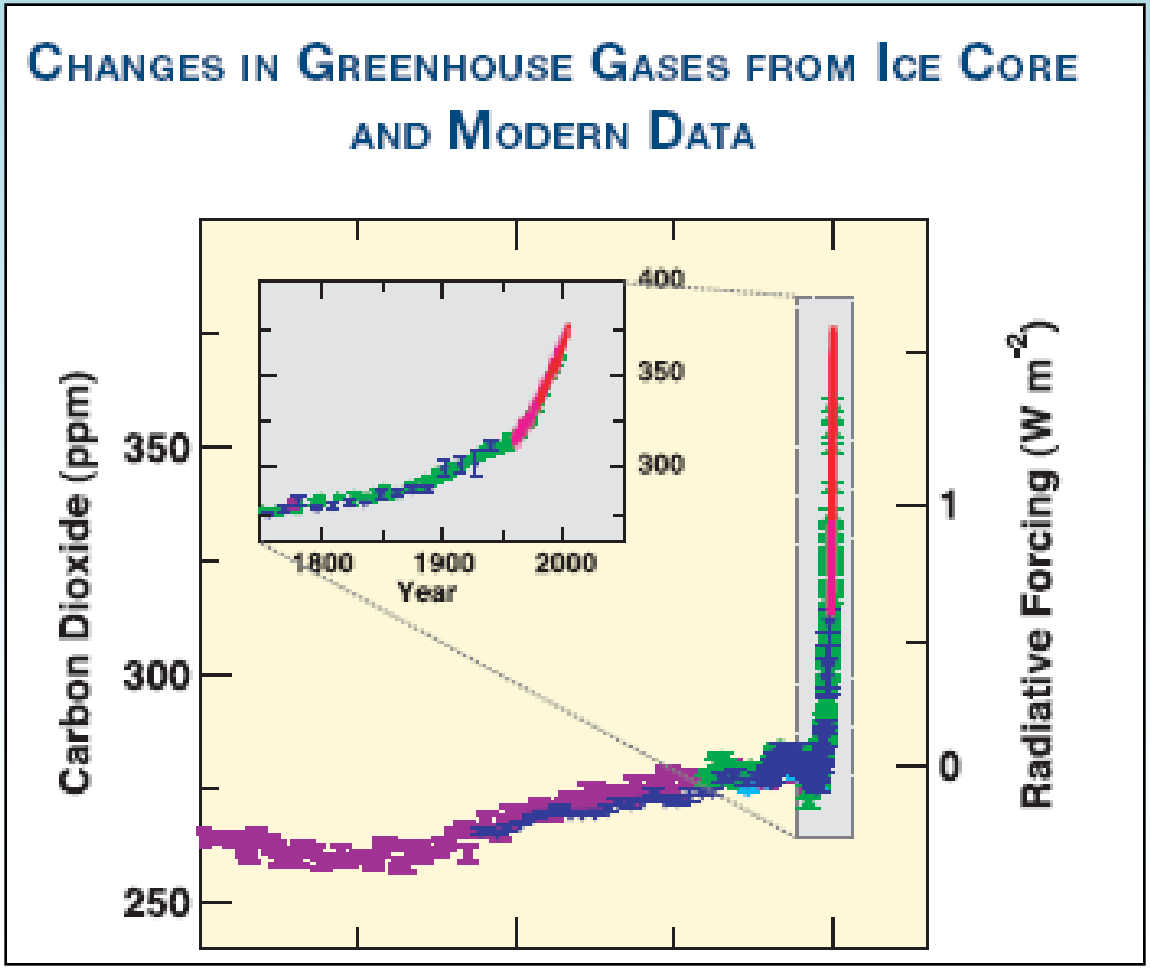
Projections of Climate Change in New Hampshire





Drivers of Climate Change



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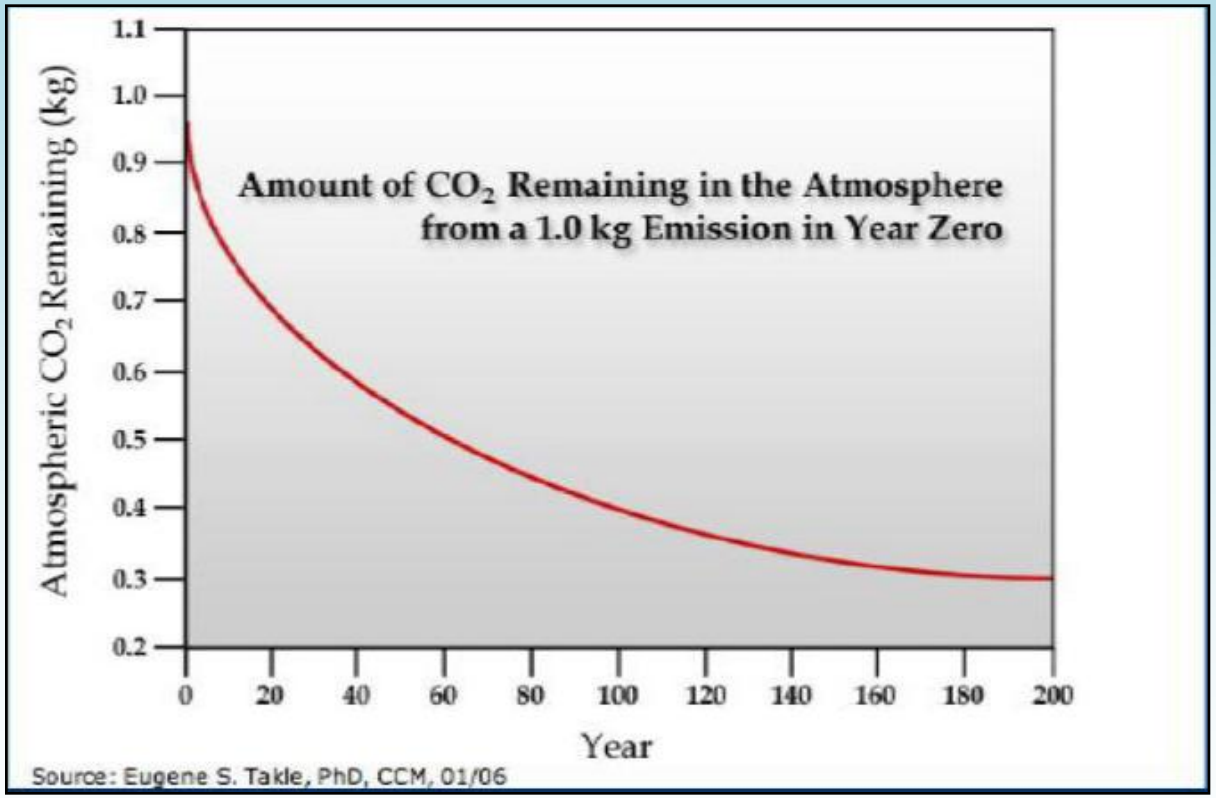
Drivers of Climate Change



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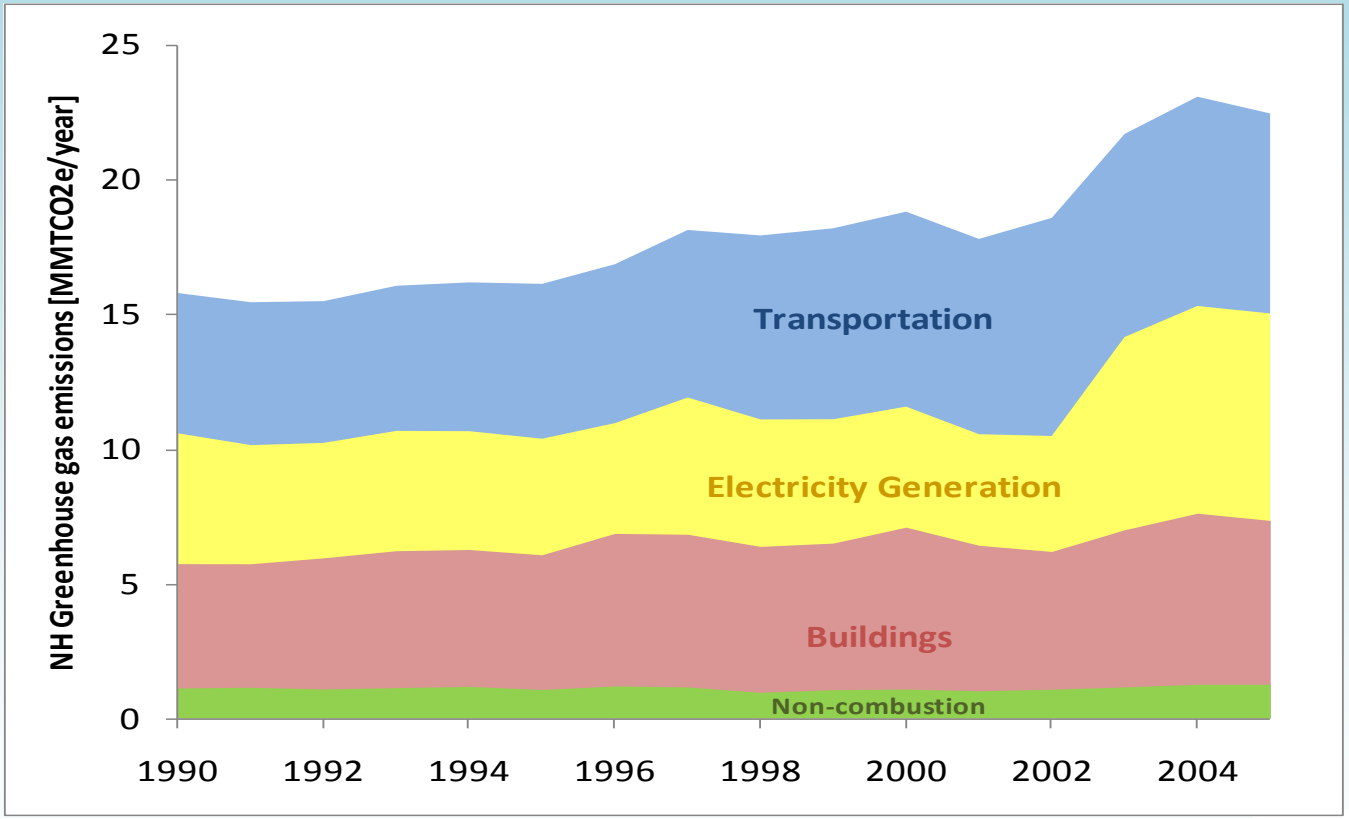
Greenhouse Gas Emissions Inventory



Historical data from EPA

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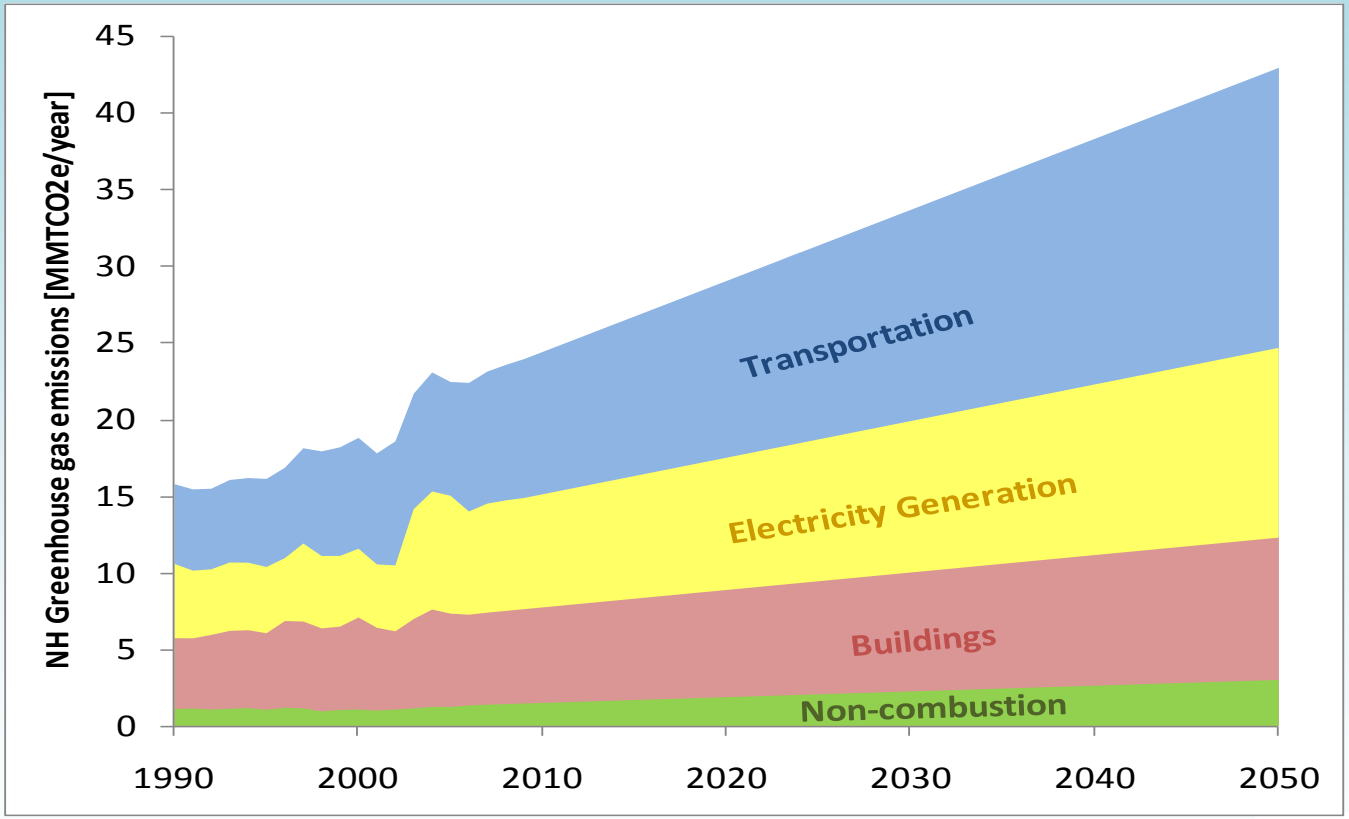
Greenhouse Gas Emissions Projections



Historical data from EPA
Business as Usual (BAU) estimates from CSNE

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Climate Change Policy Task Force Recommended Goals

- Reduce greenhouse gas emissions
  20% below 1990 levels by 2025

- Reduce greenhouse gas emissions
  80% below 1990 levels by 2050

<u>STATE ACTION COMPLEMENTS GLOBAL EFFORTS</u>

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Overarching Strategies to Achieve Goals

1. Maximize energy efficiency in buildings and transportation;
2. Increase renewable and low-emitting heat and electric power sources;
3. Protect our natural resources to maintain the amount of carbon sequestered;
4. Develop an integrated education, outreach and workforce training program; and
5. Adapt to existing and potential climate change impacts.

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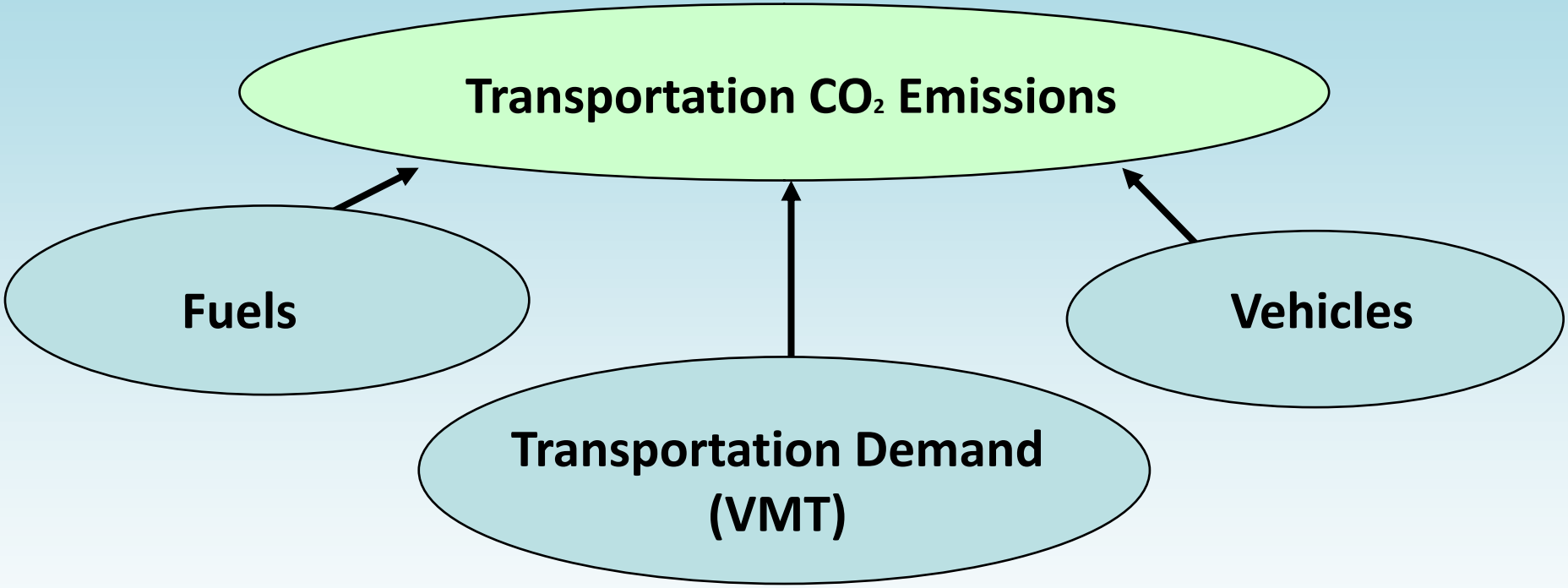
Greenhouse Gas Emissions
Transportation Sector



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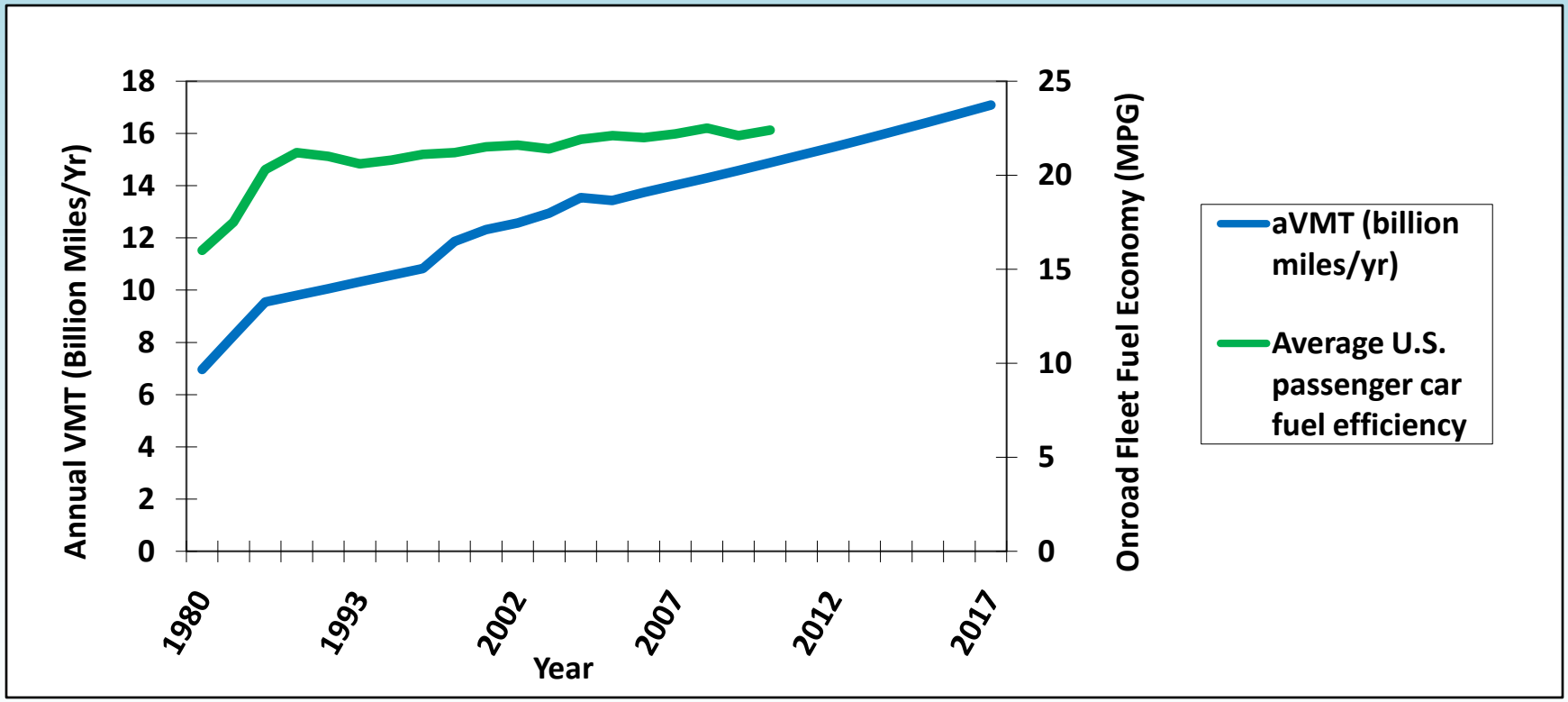
Greenhouse Gas Emissions
Transportation Sector



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Greenhouse Gas Emissions
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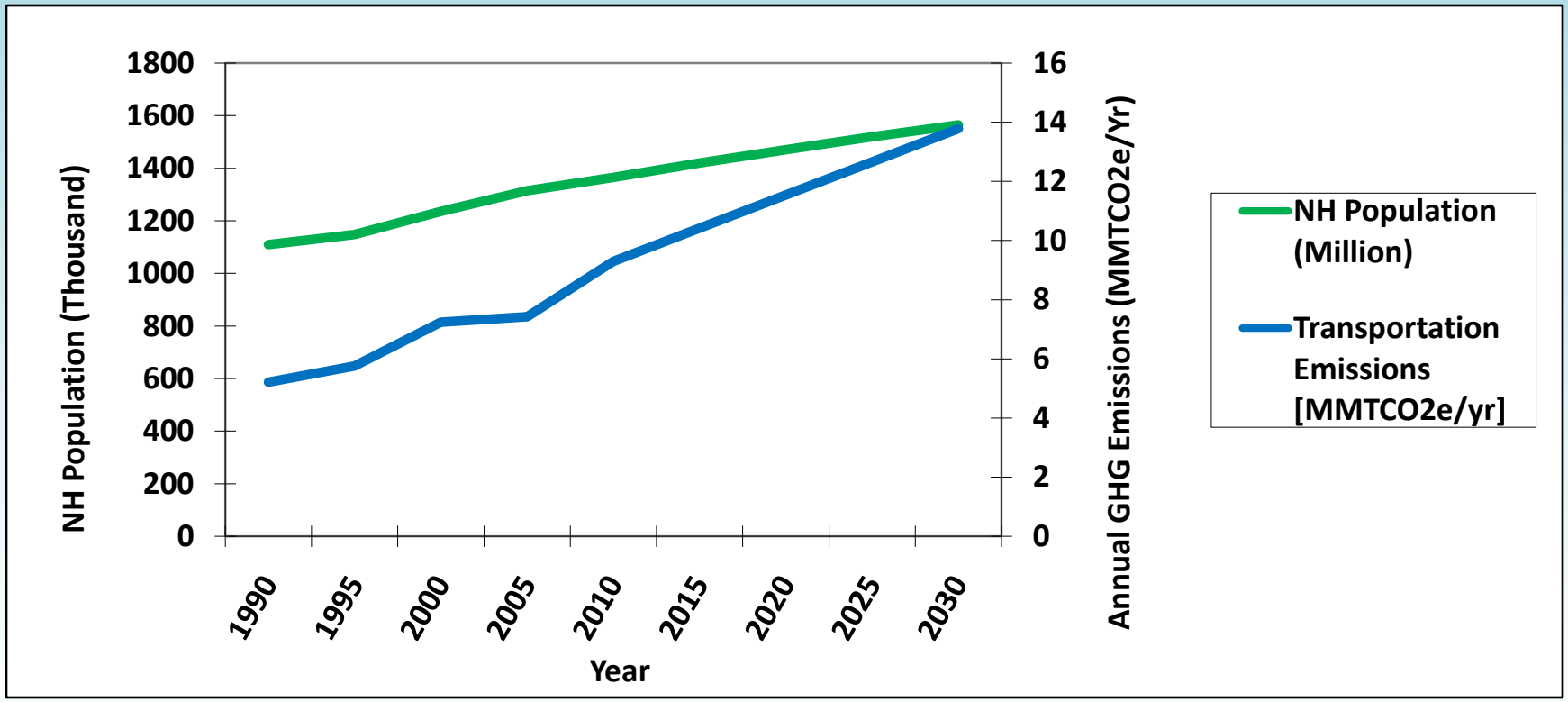

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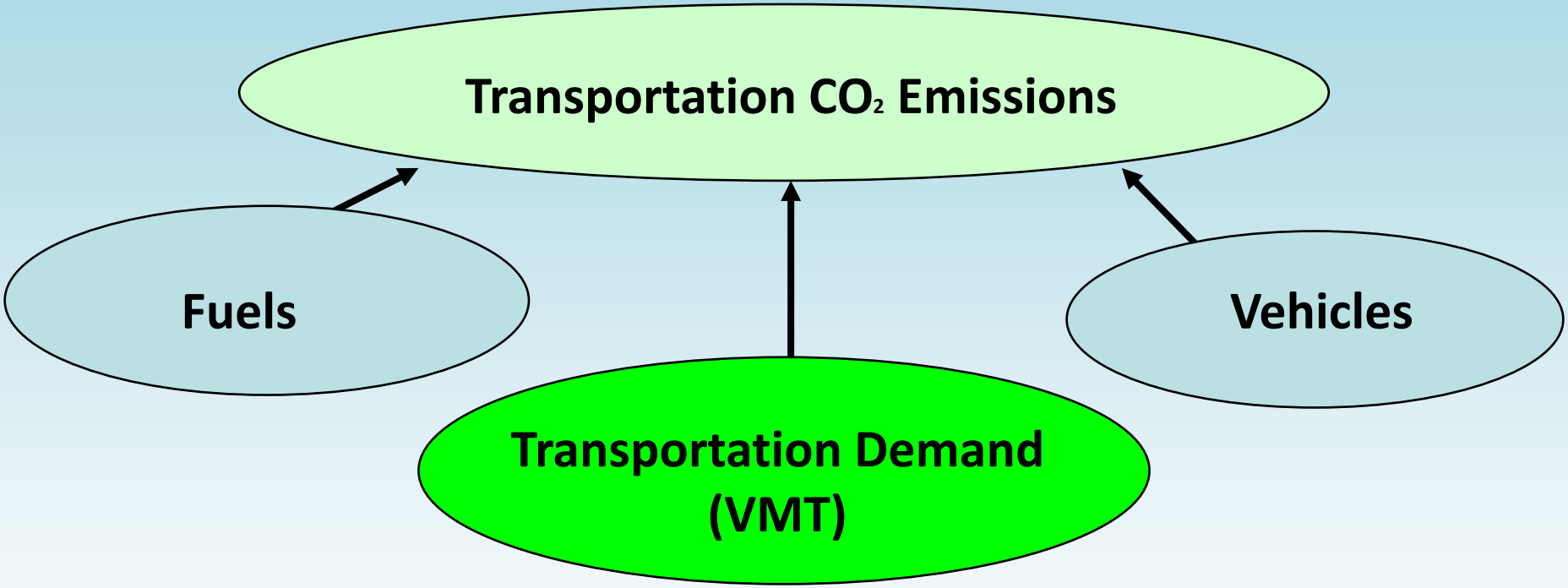
Greenhouse Gas Emission REDUCTIONS
Transportation Sector



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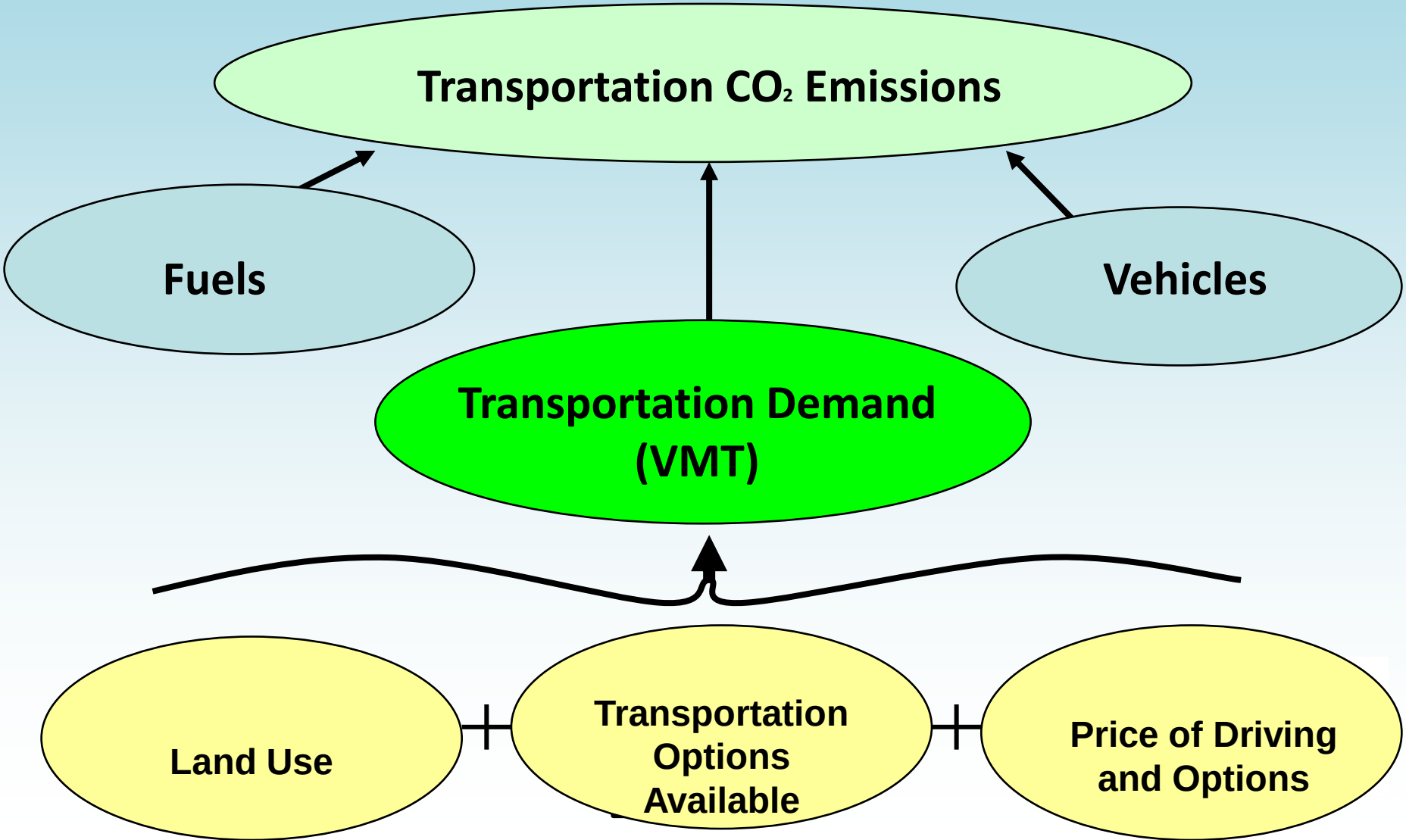
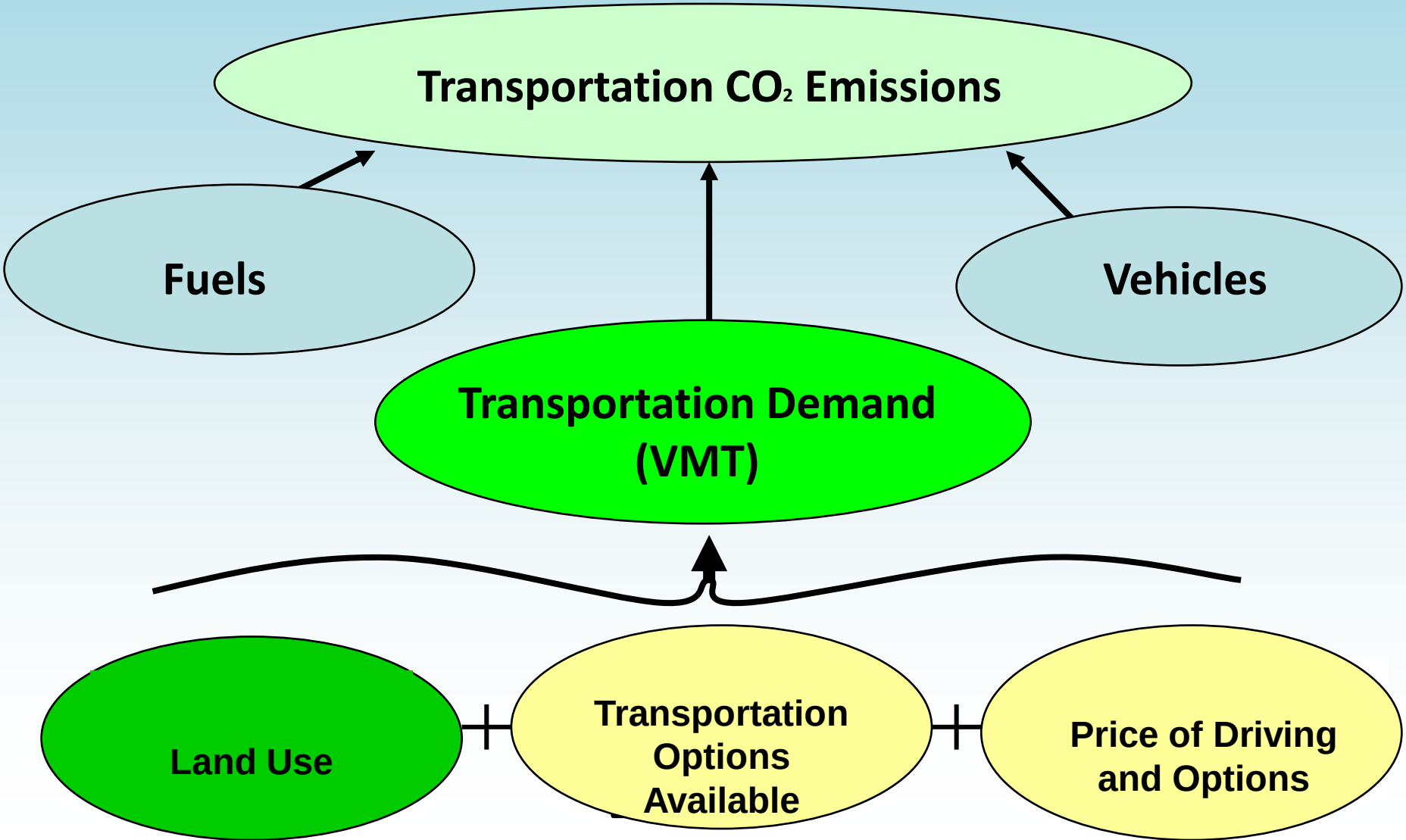
Greenhouse Gas Emission REDUCTIONS
Transportation Sector



Greenhouse Gas Emission REDUCTIONS
Transportation Sector



Current New Hampshire Land Use Patterns

- Rapidly growing small towns
- Scattered development
- Dispersing population
- Increasing rate of land consumption
- Segregated land uses
- Lack of centers
- Poor accessibility

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Desired Outcomes

- Open space preservation
- Higher density development
- Concentrated activity centers
- Mixed use development
- Pedestrian oriented design
- Increased density near transit

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Recommended Land Use Actions

- Assess Greenhouse Gas Development Impact Fees
- Streamline Approvals for Low- Greenhouse Gas Development Projects
- Develop Model Zoning to Support Bus/Rail Transit
- Develop Model Zoning for Higher-Density, Mixed-Use Development
- Continue/Expand Funding, Education, and Technical Assistance to Municipalities

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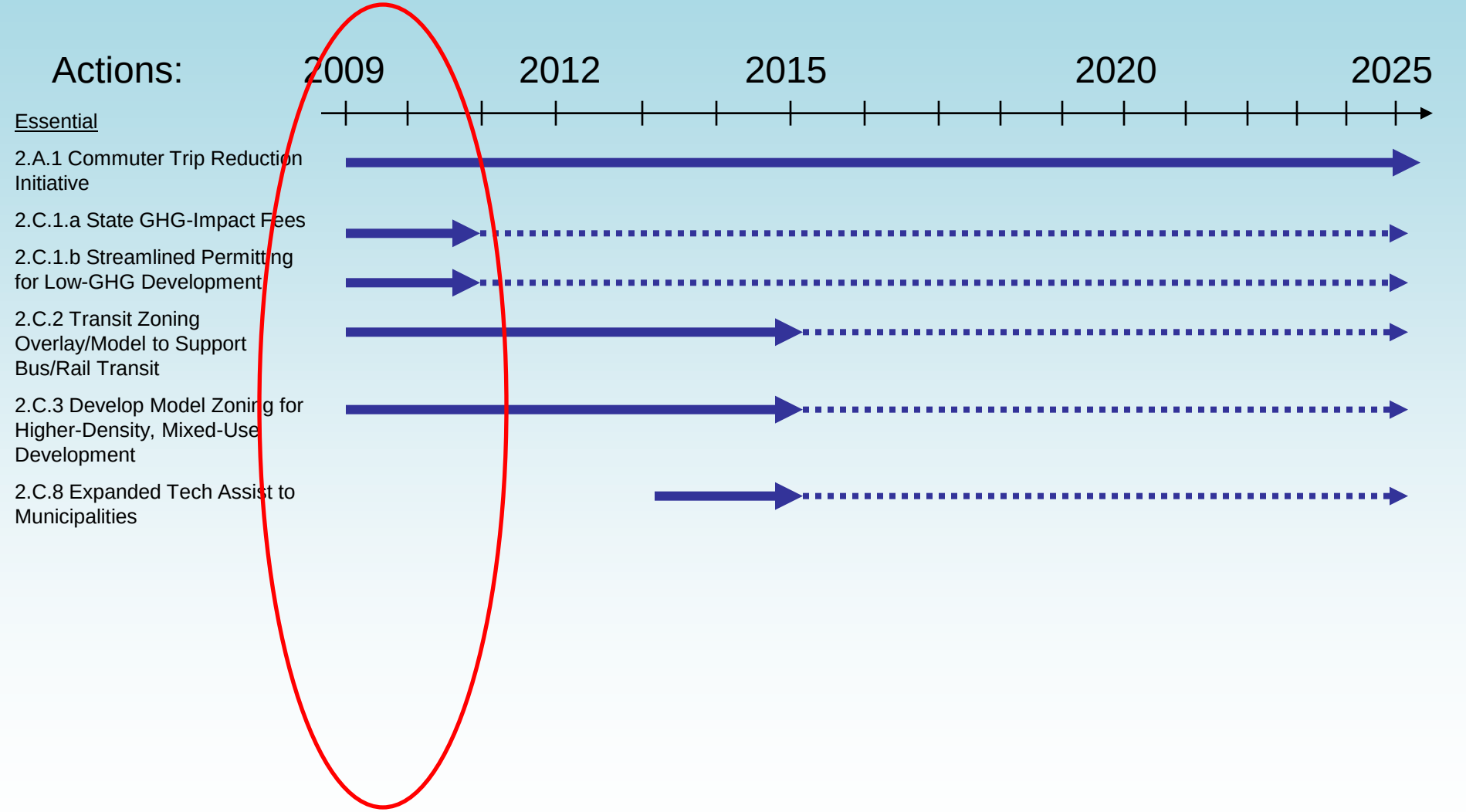
Encourage Appropriate Land-Use Patterns that Reduce VMTs



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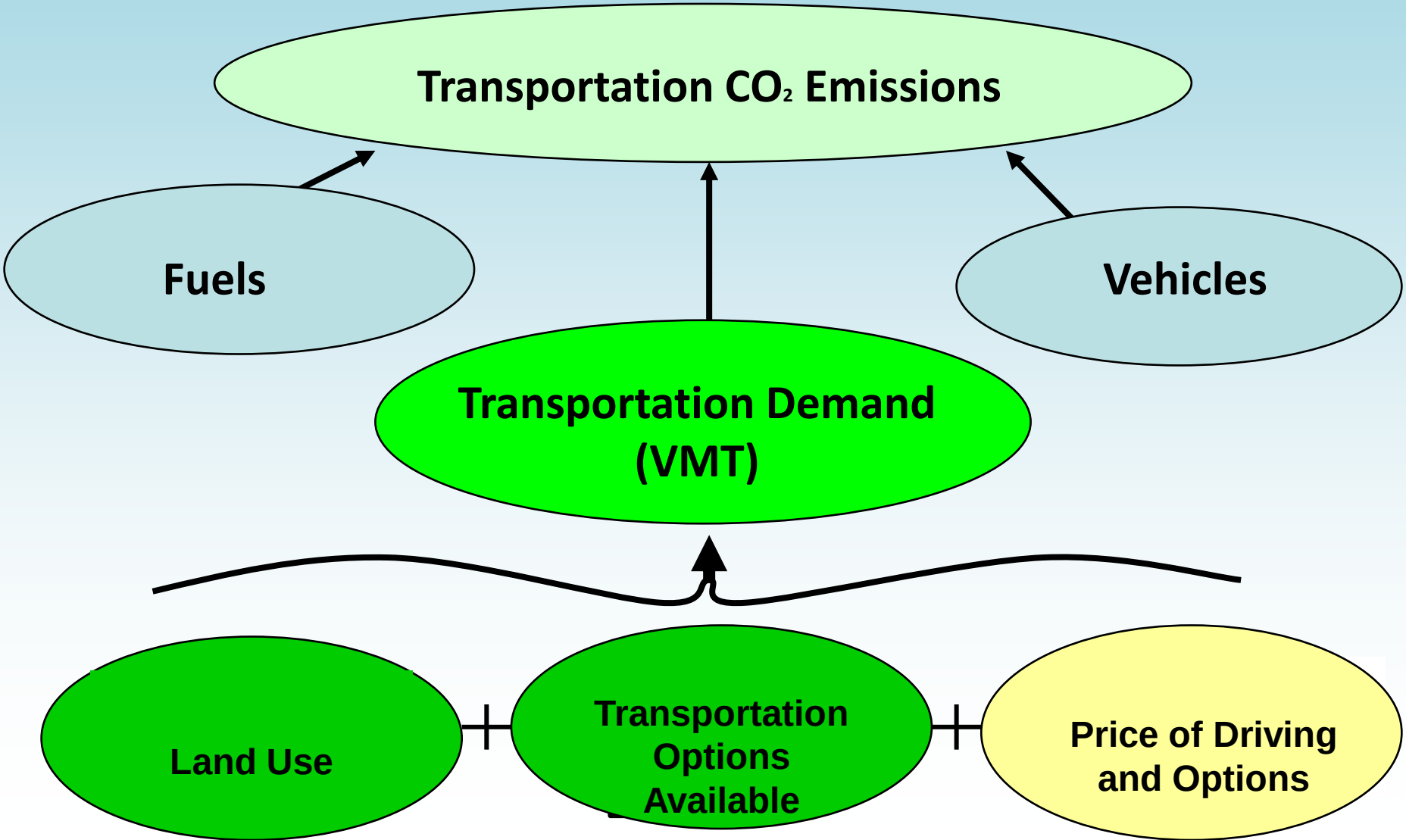
Transportation Sector



Desired Outcomes

- Expand existing transit availability
- Increase transit options
- Increase connectivity of transportation system

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Desired Outcomes

Recommended Transit Actions

- Improve Existing Local/Intra-Regional Transit (Bus) Service
- Expand Local/Intra-Regional Transit (Bus) Service
- Improve Existing Inter-City Bus Service
- Expand and Improve Bicycle and Pedestrian Infrastructure
- Maintain and Expand Passenger Rail Service
- Maintain and Expand Freight Rail Service
- Implement a Stable Funding Stream to Support Public Transportation
- Expand Park-and-Ride Infrastructure

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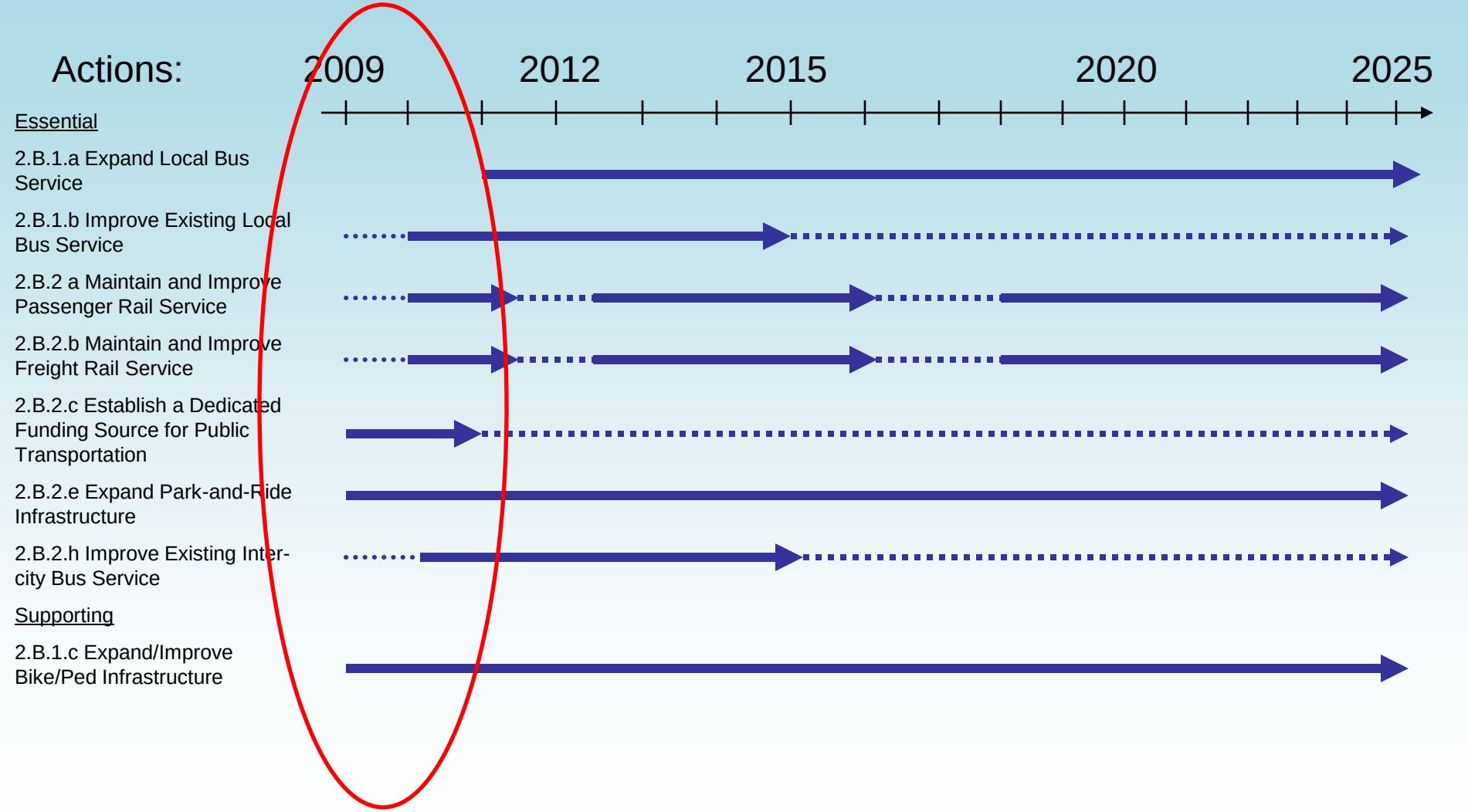
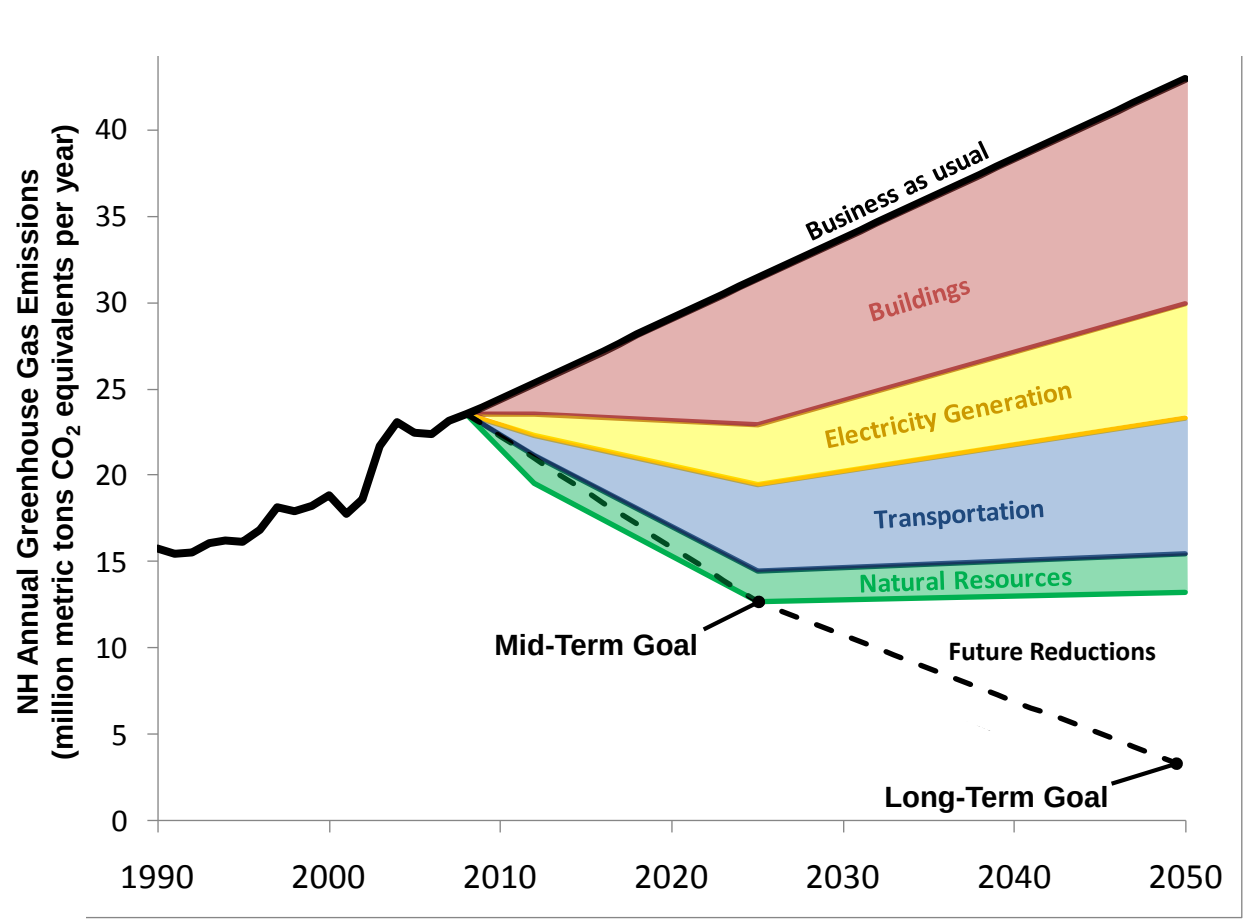
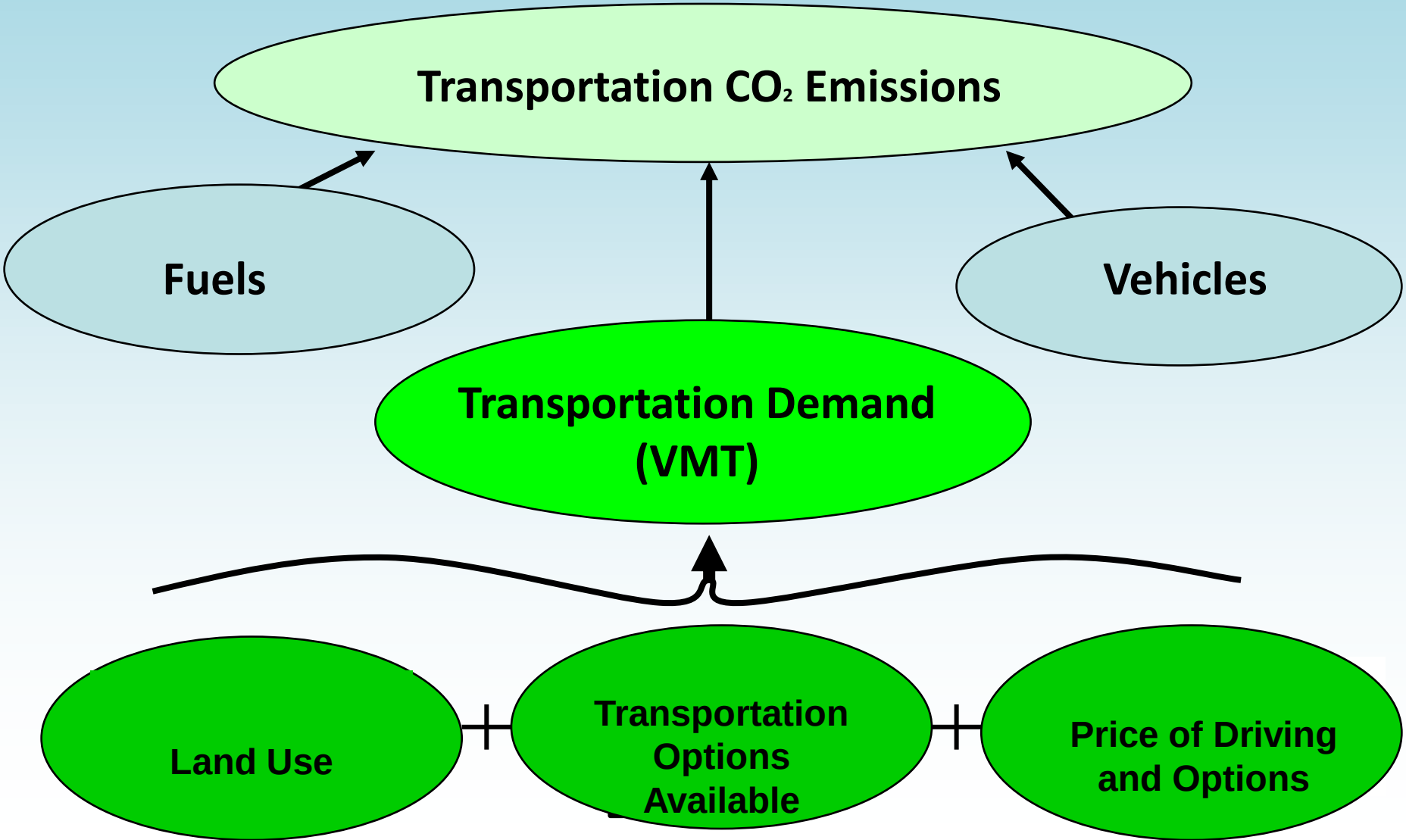
Reduce VMTs through an Integrated Multi-Modal Transportation System



Climate Action Plan
Emission Reduction Potential



Greenhouse Gas Emission REDUCTIONS
Transportation Sector



Plan for Existing and Potential Climate Change Impacts

- Develop and Distribute Critical Information on Climate Change
- Promote Policies and Actions to Help Populations Most at Risk
- Strengthen Protection of New Hampshire's Natural Systems
- Increase Resilience to Extreme Weather Events

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Moving Forward

- NH Climate and Energy Collaborative
  - Six members from the business community.
  - Six members from the public sector.
  - Six members from the education and nonprofit sectors.

- Implementing Partners
  - “Boots on the Ground”

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NH Energy and Climate Collaborative

- "Keeper of the Plan"
- Develop yearly work plans
- Guide and approve staff level work products
- Identify potential areas of research and economic development
- Report on progress against goals of the Plan
- Hold an annual meeting to report on progress
- Revise the Plan in a regular fashion

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